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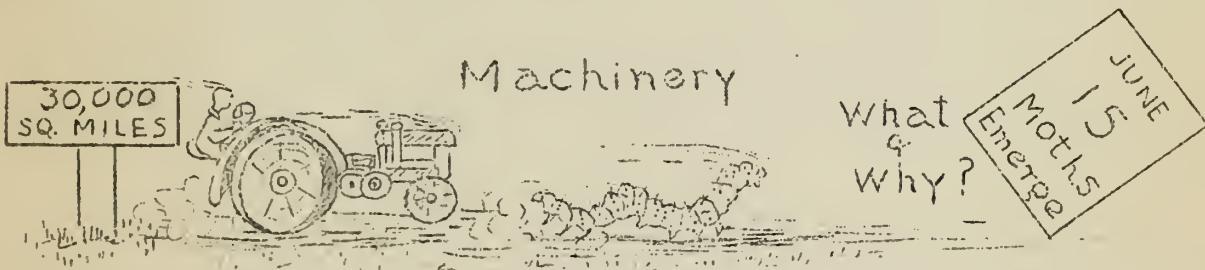


Issued in the interest of corn-borer control conducted by the United States Department of Agriculture in cooperation with the State departments of agriculture and State agricultural colleges in New York, Pennsylvania, Ohio, Michigan, and Indiana.

No. 9

Washington, D. C.

May 28, 1927



SUCCESS NOW HINGES ON MACHINERY

Machinery is the solid backing of the campaign. It is the security to the farmer that if he cleans up, his neighbor also must clean up and make his work effective. It is a pledge of good faith to the farmers who have voluntarily cleaned up and the only hope of adequate clean-up. An attempted compulsory clean-up without adequate machinery is certain to be incomplete and a failure in borer control.

No campaign machinery was bought haphazardly. A careful survey was made of the machinery requirements of the campaign. The needed machinery was bought from the lowest bidder, usually below list prices. Here are a few facts and figures as to the number, need, and use of these machines:

There are 2,500,000 acres of cornland to be cleaned up in the campaign, a great deal of which will be cleaned up voluntarily. To safeguard the farmers who did the work voluntarily, however, it was necessary that the regulatory forces be prepared to handle as much as 500,000 acres in approximately 30 working days. The fields left, whatever the acreage, will be scattered over the entire area of 30,000 square miles extending from New York to Indiana, a distance of 350 miles, all of which must be cleaned up before the moths emerge in June. To transport the clean-up crews and machinery from farm to farm over this territory, 508 half-ton trucks and 175 ton trucks are being used. This is an average of 8 trucks to a county. Heavy machinery and tractors are being hauled by 100 three and one-half ton trucks.

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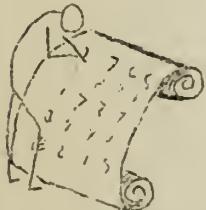
In this area, there are 64 county supervisors who assisted by six or more inspectors must visit every farm in their county. There are from 2,000 to 5,000 farms in each county. To meet this transportation problem 75 Willys-Overland coupes were bought and put into service. Nine 4-door Auburn sedans are used by the administrative officials who must travel long distances in their work of supervision.

All the clean-up must be done before June 15, as after that date, the borers emerge, take to their wings and their spread can not be further controlled. Speed is therefore an important factor, and burning is the best and quickest method. Heavily infested fields will be treated by the 64 burners which will also be used in fields where plowing is impracticable. Machines will be supplied with gas and oil by 15 one thousand-gallon tank trucks, 50 six hundred-gallon tank trucks, and 64 tank trailers.

ECONOMY is always one of the main considerations in deciding how to clean up a field, and plowing will therefore be used in most cases. This phase of the work is being handled with 880 heavy tractors, 360 light tractors, 334 three-gang plows, 450 - 18" tractor plows, and 800 stubble beaters.

This is an average of 15 tractors and about 20 plows and stubble beaters in each of the 82 counties to finish up the clean-up in the next two weeks.

KEEPING TAB ON THE BORER



"In general the conditions relating to the clean-up campaign are most encouraging in all area observed. Surprising results have been obtained by some of the farmers in achieving what appears to be a complete clean-up," says D. J. Caffrey in charge of the corn-borer research work in a report dated May 20.

Mr. Caffrey based his statement on the preliminary results of debris examinations made on 63 fields in the Bono-Reno, Ohio area. With a total acreage of 486 acres, the estimated borer population of these fields was 5,140.4 borers per acre before the clean-up and 339.8 borers per acre after treatment of an estimated average REDUCTION IN NUMBER OF BORERS PER ACRE OF 93.4%.

ANALYSIS OF THIS PRELIMINARY SUMMARY, BASED UPON REDUCTION IN BORER POPULATION

6 fields - 100% reduction)	Note: 25 fields
5 " 99% to 100% ") from the group of
5 " 98 " 99 ") 63 fields showed
3 " 97 " 98 ") between 95 to 100%
2 " 96 " 97 ") clean-up.
4 " 95 " 96 "	
15 " 90 " 95 "	2 fields -- 40% to 50% reduction
3 " 85 " 90 "	3 " 30 " 40 "
2 " 80 " 90 "	2 " 10 " 20 "
4 " 70 " 80 "	1 " 5 " 10 "
4 " 50 " 60 "	2 " Apparently no reduction (disked fields)

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**FARMERS WEST OF THE CLEAN-UP
TAKE TIME BY THE FORELOCK**

Farmers just west of the campaign area in the path of the westward march of the corn borer believe in preparedness and are taking a real live interest in learning all they can about how to recognize a borer when they see it and how to control it. In Indiana, 6,614 people left their farm work to visit the Corn Borer Special, an exhibit train operated in the border counties, and get the real dope on the borer. They were much interested in the farm machinery adjusted for control work and asked many questions about it. Exhibits showed the life history of the borer and samples of its work in the corn fields. A lecture car was also included where three reels of motion pictures were shown followed by short talks or discussions on the corn borer problem.

THROUGH THE  ECONOMIST'S GLASSES

H. M. Dixon, extension economist, gives a glimpse of the farm-management problem:

"Farmers in the area not only realize the importance of this immediate campaign but are looking forward 5 or 10 years to the farm-management adjustments which will be necessary to meet this situation.

"This is not a hopeless situation, and there is no need for farmers to become "panicky" of the future. Many of the farmers in the quarantined area have good soil and within easy range of good markets. With control measures in general practice, they can and will continue to grow corn. Equipment will be developed to help lift the load of the extra labor necessary in corn production. Profitable crops will be developed and fitted into the farming business to occupy some of the acreage now devoted to such crops as oats that have not been a satisfactory income-producing crop for years.

"During a recent trip into the corn-borer area of northwestern Ohio, some study was made of the farm-management adjustments farmers are making to meet the situation. It was apparent that some have already made such adjustments this year that with normal yields and average prices their income should be increased over the previous year. For instance, one farmer, after thinking his problem through, decided to reduce his corn from 50 acres to 25 and to put 20 acres into sugar beets and 5 acres into tomatoes. In so far as this change can be anticipated in dollars and cents, it would seem that these changes and others this farmer has made should add \$500 to his income over that of the old plan. Another farmer, however, decided to reduce his corn acreage from 30 acres to 21 and to put this extra area into oats. This makes a high proportion of his crop area in a low-profit crop, and with the added cost involved in producing oats this year it is apparent that this change will return a reduced income of

(3)

(4)

at least \$300. Still other farmers have found it necessary to increase their corn acreage this year, while others are holding pretty close to their usual plan.

"So the corn-borer control area should represent a real demonstration in what can be accomplished in meeting an acute problem by comparatively quick adoption of improved farm practices and improved farm-business adjustments to meet a situation that if allowed to continue would mean destruction of the farm income and standard of living of thousands of farmers."

LEARNED IN F.A.Ficht, corn-borer specialist, entomology department, Purdue INDIANA University, after an investigation of the corn borer in the infested area in Indiana during the first week in May, reports as follows:

(1) Effectiveness of clean-up.

About 90 per cent of the fields plowed were plowed exceptionally well and contained less than 600 feet of stalk per acre. The better plowed fields contained about 50 to 90 feet of stalk per acre on the surface. The 10 per cent that were poorly plowed had as high as 6,000 feet of stalk per acre on the surface.

(2) Preparation for plowing.

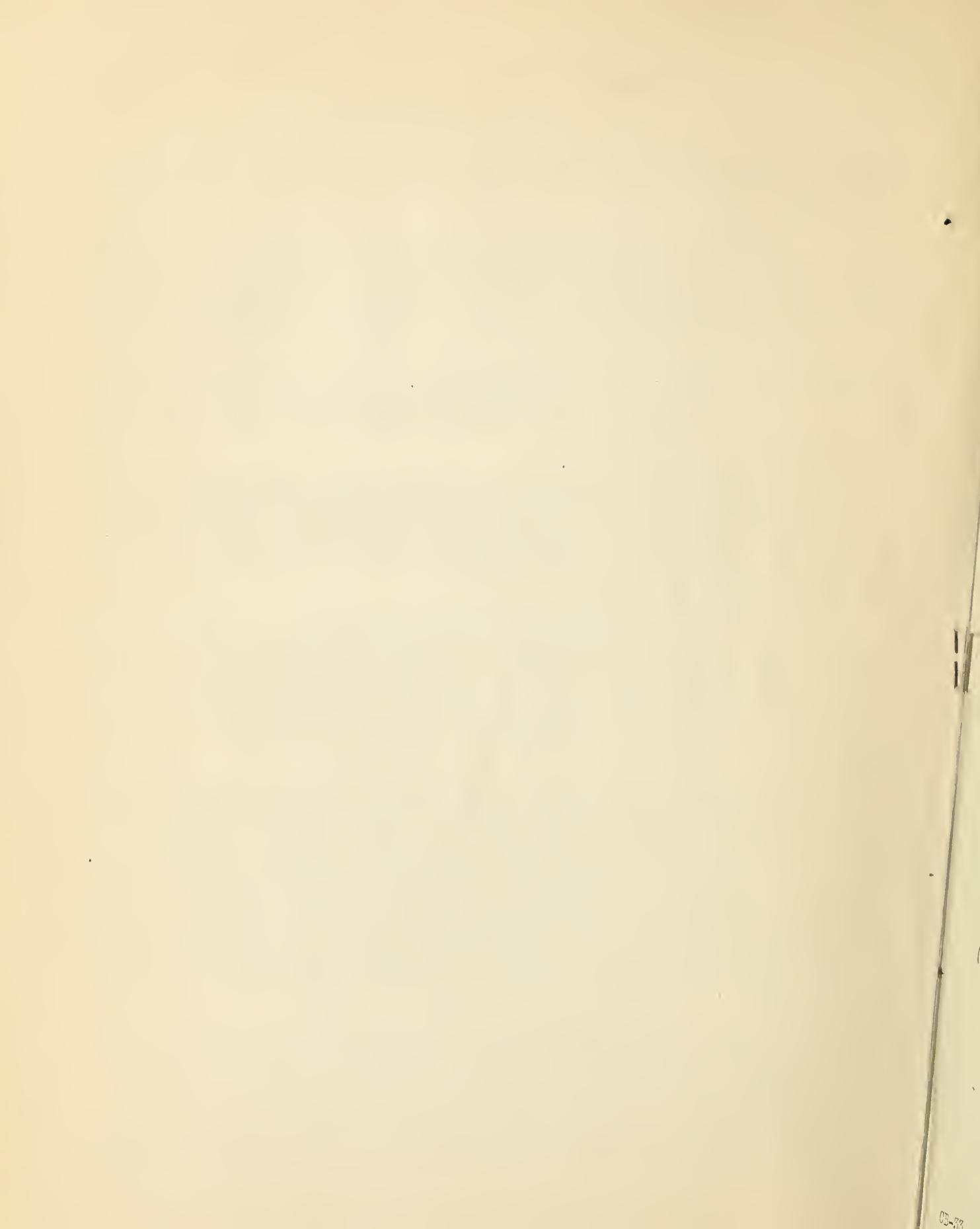
A few farmers were able to do good plowing which did not leave more than 60 or 70 feet of stalk per acre on the surface, without any previous treatment of the cornstalks. In general, however, this was not the case. Under most conditions I would recommend that the stalks be raked and burned to save the farmer labor in picking off stalks and to afford better control. Rolling with roller or cultipacker will aid in plowing and is much to be preferred to disking.

(3) Plows.

In general, 12-inch plows were not satisfactory for plowing under cornstalks, in spite of the fact that some farmers were doing good work with them. Nearly any plow with a 14 to 18 inch bottom could be made to do a good job if properly adjusted and the proper attachments used. It would be difficult to say which attachment was the best for putting under the stalks. It depended on the type of plow, the soil conditions, and the condition of the material to be plowed under. Wires, weed hooks, chains, stalk flippers, and combinations of these were used to advantage. The arrangement of these depended on the conditions met with in individual cases. The assistance rendered by the assistant county agents in this regard was of great value.

(4) Barnyards.

Barnyards have been greatly neglected. Only about 18 per cent had been cleaned thoroughly of all corn refuse by May 7. Cases have been noted where the farmers have been covering with straw the piles of manure containing cornstalks. This should be discouraged as well as the scattering of the stalks over large feed lots where complete clean-up is nearly impossible. From all observations it will be very desirable to encourage the use of a shredder.



PROGRESS IN THE COUNTIES
as reported by the supervisors

PENNSYLVANIA "General conditions good and farmers are all interested in the clean-up. A few days of sunshine will work wonders. Have no fear of results. Inspectors are working hard and with enthusiasm." (Warren County.)

INDIANA "Spent the day (May 15) in Lima township and think 80 per cent of fields will pass inspection." (Steuben and Lagrange Counties.)

NEW YORK "Inspector claims a 100 per cent voluntary clean-up in Port-land and Stockton townships in Chautauqua County." (Chau-tauqua County.)

MICHIGAN "Wet weather has prevented work being done on the land, but all seem more and more determined to clean up right, just as soon as work can be started. Sentiment improves all the time." (Huron County.)

"Men are feeling fine, working hard, and cooperating splendidly." (Oakland County.)

"The work is going along very rapidly. Those who have not completed are on the last lap and I am insisting on a 100 per cent clean-up." (Shiawassee County.)

OHIO "Clear-up work is going rapidly. Many are cleaning up where we thought we would have to clean up for them." (Medina County.)

"Farmers very busy with clean-up work. Inspectors report that no great amount of compulsory clean-up work will be required, except on so-called 'abandoned farms.' Owner operators almost without exception doing good work and very few making objections." (Summit County.)

"Much of the success of the campaign in Lorain County is due to the thoroughness with which the story of the clean-up has been told to the farmers through county meetings by our county agent and his assistant. The latter is now talking to rural school children at their schools." (Lorain County.)

